

Approved For Release 2000/09/11 : CIA-RDP78-02820A000500020063-5

**The Film - RD-76, T.O. 1**

19 March 1959

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## Trip Report - Time Great Market

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1. On 12 March 1959 the writer visited the [REDACTED]  
[REDACTED]s. The purpose of this trip was to  
monitor the progress on the subject task. This task was discussed  
with the following company personnel:

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- Director of Micromics  
Project Engineer  
Project Engineer

2. The subject task provides for the fabrication of 16 IH-7 time event markers (TEM) and the development of one ruggedized prototype IH-7 (TEM-A). Initial development of the IH-7 unit was accomplished under RD-76, Task Order C.

3. The TEM is a miniature time code generator (5" x 1-3/4" x 2") controlled by a watch movement. The watch is driven by a constant torque spring motor which when fully wound and then mechanically released will operate the movement for a period of 60 days. When the TEM is electrically interrogated, a series of pulses is presented at the output terminals. This binary coded time group represents the number of elapsed minutes from the time of activation. The TEM will be used with ELINT systems to denote the time that sample signals are recorded.

4. The engineering model of the TEM was inspected and tested by R&D and SPS/EA. These tests have proven satisfactory electrical operation; however, the unit appeared somewhat fragile for field use. Experimental field tests were conducted with the unit packaged in shock absorbent material; operation of the unit under these conditions was found to be satisfactory.

5. As requested by SFG/EA, R&D has arranged for the procurement of 16 prototype time event markers in addition to initiating a redesign program for ruggedizing the construction. The purpose of fabricating 16 prototypes based on the present design is to satisfy pending field requirements as soon as possible. At the time of the writer's visit to the plant, the contractor had just completed testing and trouble shooting the first TEM prototype to be provided under this task.

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1. *Staphylococcus aureus* 2. *Staphylococcus epidermidis* 3. *Staphylococcus saprophyticus* 4. *Staphylococcus sciuri* 5. *Staphylococcus carnosus* 6. *Staphylococcus* sp.

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6. [REDACTED] informed the writer that they had experienced considerable difficulties in alignment of this unit which they had not experienced in the first engineering model. They had analyzed the trouble and found that it was caused by an accumulation of eccentricities in the gear train and associated parts. To eliminate this problem, they suggested changing the once per minute cam-operated switch to a segmented cylinder switch. The change would provide a constant torque requirement on the parts and reduce the alignment requirements placed on the parts and reduce the train of gears and parts involved. Since the cost of the original cam-operated switch was offset by the cost of the new segmented cylinder switch, and no additional cost was involved, this change was granted. However, this change will delay delivery of the first unit by approximately 2 to 3 weeks. Delivery of the first unit incorporating this change is expected by 7 May 1959. [REDACTED] is in charge of fabricating the remaining 15 TEM units. The writer and [REDACTED] reviewed the work schedule and delivery of parts and no further delay is foreseen at this time.

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7. The development of a modularized TEM prototype is proceeding satisfactorily. [REDACTED] is in charge of this development and at the time of the writer's visit had the preliminary layout finalized. In addition to this, several assemblies had already been fabricated. The changes that have been made to this unit as compared to the original prototypes has been considerable. These changes should not be considered final; presently they include the following:

- a. A solenoid-wound watch
- b. Modular construction of the basic solenoid-driven disc units.
- c. Transistor operation of the solenoids.
- d. All operating units mounted on the top plate for ease of accessibility.
- e. Closer control on ratchets and gears for reduction of eccentricities.
- f. Wider contact sectors on the printed circuit board of the sweep readout.

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Distribution:  
R&D Subject File  
Monthly Report  
R&D Lab / SPS  
EP Chrono

OC-E/R-D-EP/RFH:brc (19 March 1959)